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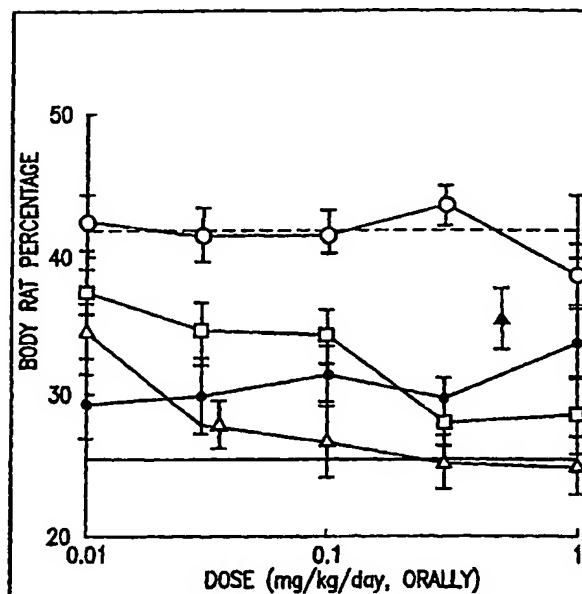
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(54) Title: **METHODS OF TREATING AND/OR SUPPRESSING WEIGHT GAIN**



(57) Abstract: Novel methods for the medical treatment and/or prevention of obesity, abdominal fat, and insulin resistance in susceptible warm-blooded animals including humans involves the administration of selective estrogen receptor modulators (SERMs). A combination of a SERM with an amount of estrogen or a sex steroid precursor selected from the group consisting of dehydroepiandrosterone, dehydroepiandrosterone sulfate, androst-5-ene-3 β ,17 β -diol and compounds converted *in vivo* to one of the foregoing precursors or estrogen is also disclosed.

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patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61K31/352 A61K31/4025 A61K31/453 A61K31/5377 A61K45/06 A61P3/04 A61P3/10 A61P3/06		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 A61K		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) CHEM ABS Data, MEDLINE, BIOSIS, EMBASE, SCISEARCH, EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	PICARD F ET AL: "Effects of the estrogen antagonist EM - 652.HCl on energy balance and lipid metabolism in ovariectomized rats." INTERNATIONAL JOURNAL OF OBESITY AND RELATED METABOLIC DISORDERS, (2000 JUL) 24 (7) 830-40. , XP000979846 the whole document --- -/--	1-7,25, 27-35, 37,38
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents: *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family		
Date of the actual completion of the international search 20 February 2001		Date of mailing of the international search report 26/02/2001
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Hoff, P

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>WO 99 63974 A (ENDORECHERCHE INC) 16 December 1999 (1999-12-16)</p> <p>abstract page 5, paragraph 4 -page 6, paragraph 1 page 23 page 34 page 41, last paragraph -page 42, paragraph 1; examples 5,6 page 63, last paragraph -page 64, paragraph 1; claims 1,2,10,21-29,33; figure 3A</p>	10,11, 29-35, 37,38
X	<p>LUO S ET AL: "COMBINED EFFECTS OF DEHYDROEPIANDROSTERONE AND EM-800 ON BONE MASS,SERUM LIPIDS, AND THE DEVELOPMENT OF DIMETHYLBENZ(A)ANTHRACENE INDUCED MAMMARY CARCINOMA IN THE RAT" ENDOCRINOLOGY,US,BALTIMORE, MD, vol. 138, no. 10, 1997, pages 4435-4444, XP000921482 ISSN: 0013-7227 the whole document</p>	1-11, 29-35
X	<p>LUO S ET AL: "PREVENTION OF DEVELOPMENT OF DIMETHYLBENZ(A)ANTHRACENE (DMBA)- INDUCED MAMMARY TUMORS IN THE RAT BY THE NEW NONSTEROIDAL ANTIESTROGEN EM-800 (SCH57050)" BREAST CANCER RESEARCH AND TREATMENT,US,NIJHOFF, BOSTON, vol. 49, no. 1, May 1998 (1998-05), pages 1-11, XP000852946 ISSN: 0167-6806 the whole document</p>	1-7, 29-35
X	<p>LABRIE F ET AL: "EM - 652 (SCH 57068), a third generation SERM acting as pure antiestrogen in the mammary gland and endometrium." JOURNAL OF STEROID BIOCHEMISTRY AND MOLECULAR BIOLOGY, (1999 APR-JUN) 69 (1-6) 51-84. REF: 224 , XP000852985 the whole document</p>	10,11, 29-35, 37,38

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>LUO S ET AL: "EFFECTS OF COMBINATION OF DEHYDROEPIANDROSTERONE AND EM-800 ON BONE MASS, SERUM LIPIDS, AND THE DEVELOPMENT OF DIMETHYLBENZ(A) ANTHRACENE (DMBA)-INDUCED MAMMARY CARCINOMA IN THE RAT" BREAST CANCER RESEARCH AND TREATMENT,US,NIJHOFF, BOSTON, vol. 46, no. 1, October 1997 (1997-10), page 55 XP000852947 ISSN: 0167-6806 the whole document</p>	10,11, 29-35
X	<p>COUILLARD S ET AL: "EFFECT OF DEHYDROEPI-ANDROSTERONE AND THE ANTIESTROGEN EM-800 ON GROWTH OF HUMAN ZR-75-1 BREAST CANCER XENOGRAFTS" JOURNAL OF THE NATIONAL CANCER INSTITUTE,US,US DEPT. OF HEALTH, EDUCATION AND WELFARE, PUBLIC HEALTH, vol. 90, no. 10, 20 May 1998 (1998-05-20), pages 772-778, XP000852955 ISSN: 0027-8874 the whole document</p>	10,11
X	<p>EP 0 652 006 A (LILLY CO ELI) 10 May 1995 (1995-05-10) abstract page 3, line 21 - line 35 page 7, line 51 - line 54 page 8, line 34 -page 9, line 5; claims</p>	10,11, 37,38
X	<p>WO 99 02152 A (NOVONORDISK AS) 21 January 1999 (1999-01-21) abstract page 3, line 1 - line 21 page 7, line 11 - line 13; claims</p>	25
X	<p>EP 0 635 264 A (LILLY CO ELI) 25 January 1995 (1995-01-25) abstract page 5, line 50 -page 6, line 22 page 9, line 36 - line 40; claims 1,3,4</p>	25,27
X	<p>WO 96 02243 A (PFIZER ;THOMPSON DAVID D (US)) 1 February 1996 (1996-02-01) cited in the application abstract; claims; example 2</p>	12,17,18
X	<p>WO 99 17712 A (S W PATENTVERWERTUNGS GES MBH ;SCHMIDT ALFRED (DE); WIELAND HEINRI) 15 April 1999 (1999-04-15) abstract page 7, line 24 - line 31; claims 1,13</p>	12

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96 26201 A (ENDORECHERCHE) 29 August 1996 (1996-08-29) the whole document ----	1-38
A	WO 93 10741 A (ENDORECHERCHE INC) 10 June 1993 (1993-06-10) abstract page 9, line 1 -page 10, line 3 page 58 -page 62 page 166 -page 169; table 6 examples 34,35; tables 9-11 claims 4-7,10-12 -----	1-38

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

Continuation of Box I.2

Present claims 8,12,17,18,20,25,26,36 relate to a compound defined by reference to a desirable characteristic or property, namely "selective estrogen receptor modulator".

The claims cover all compounds having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the compound by reference to its pharmacological profile. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible.

Furthermore, the expressions "moiety convertible in vivo to hydroxyl" and "compounds converted in vivo to any of said steroids" used in claims 1,8-11,13,20,21,24,26,27,29,36 are vague and indefinite and leave in doubt as to the meaning of the technical features (i.e. the compounds) to which they refer.

Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the compounds structurally and clearly identified in the claims and examples, with due regard to the general idea underlying the present invention.

Claims searched completely : 4,7,16,19,22,23,28,32,35,37,38

Claims searched incompletely:

1-3,5,6,8-15,17,18,20,21,24-27,29,30,31,33,34,36

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

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